

This key should allow you to understand why you choose the option you did (beyond just getting a question right or wrong). More instructions on how to use this key can be found [here](#).

If you have a suggestion to make the keys better, please fill out the short survey [here](#).

Note: This key is auto-generated and may contain issues and/or errors. The keys are reviewed after each exam to ensure grading is done accurately. If there are issues (like duplicate options), they are noted in the offline gradebook. The keys are a work-in-progress to give students as many resources to improve as possible.

1. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 6 many cases reported, but the number of confirmed cases has quadrupled every 4 days. How long will it be until there are at least 1000 confirmed cases?

The solution is About 15 days, which is option C.

- A. About 9 days

You modeled the situation correctly but did not apply the properties of log correctly.

- B. About 21 days

You modeled the situation with e as the base, but solved correctly otherwise.

- C. About 15 days

* This is the correct option.

- D. About 10 days

You modeled the situation with e as the base and did not apply the properties of log correctly.

- E. There is not enough information to solve the problem.

If you chose this option, please contact the coordinator to discuss why you think this is the case.

General Comment: Set up the model the same as in Module 11M. Then, plug in 1000 and solve for d in your model.

2. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 5 many cases reported, but the number of confirmed cases has doubled every 4 days. How long will it be until there are at least 10000 confirmed cases?

The solution is About 44 days, which is option B.

- A. About 15 days

You modeled the situation with e as the base and did not apply the properties of log correctly.

- B. About 44 days

* This is the correct option.

- C. About 31 days

You modeled the situation with e as the base, but solved correctly otherwise.

- D. About 16 days

You modeled the situation correctly but did not apply the properties of log correctly.

E. There is not enough information to solve the problem.

If you chose this option, please contact the coordinator to discuss why you think this is the case.

General Comment: Set up the model the same as in Module 11M. Then, plug in 10000 and solve for d in your model.

3. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 26 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

The solution is About 8 percent, which is option A.

A. About 8 percent

* This is the correct option.

B. About 3 percent

This corresponds to not solving for the increase properly.

C. About 13 percent

This corresponds to treating both radius and height as equal contributors and not solving correctly.

D. About 12 percent

This corresponds to solving correctly but treating both radius and height as equal contributors to the volume.

E. None of the above

If you chose this, please contact the coordinator to discuss how you solved the problem.

General Comment: Remember that when plugging the increases of values in, you need to treat it as that percentage above 100. For example, a 5 percent increase means 105 percent.

4. For the scenario below, model the rate of vibration (cm/s) of the string in terms of the length of the string. Then determine the variation constant k of the model (if possible). The constant should be in terms of cm and s.

The rate of vibration of a string under constant tension varies based on the type of string and the length of the string. The rate of vibration of string ω decreases as the cube length of the string increases. For example, when string ω is 2 mm long, the rate of vibration is 29 cm/s.

The solution is $k = 0.23$, which is option A.

A. $k = 0.23$

* This is the correct option, which corresponds to the model $R = \frac{k}{l^3}$ AND converts from mm to cm.

B. $k = 3.62$

This option uses the model $R = kl^3$ as if this is a direct variation AND does not convert from mm to cm so that the units match.

C. $k = 3625.00$

This option uses the model $R = kl^3$ as if this is a direct variation.

D. $k = 232.00$

This option uses the correct model, $R = \frac{k}{l^3}$, but does not convert from mm to cm so that the units match.

E. None of the above.

Talk with the coordinator if you chose this option.

General Comment: The most common mistake on this question is to not convert mm to cm! When modeling, you need to make sure all of the units for your variables are compatible.

5. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 24 liter 20 percent solution of chemical χ using two different solution percentages of chemical χ . When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 18 percent and 33 percent solutions, what was the amount she used of the 33 percent solution?

The solution is 3.20liters, which is option A.

A. 3.20liters

*This is the correct option.

B. 12.34liters

This was a random value. If this was not a guess, contact the coordinator to talk about how you got this value.

C. 20.80liters

This is the concentration of 18 percent solution.

D. 12.00liters

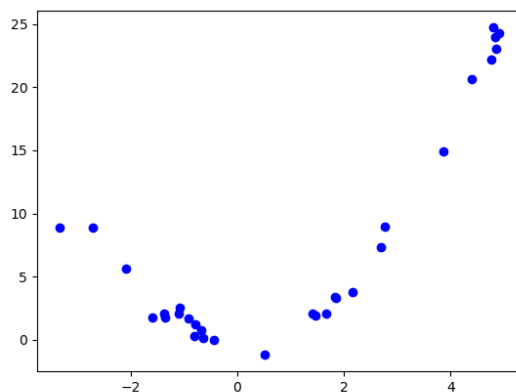
This would be correct if Brittany used equal parts of each solution.

E. There is not enough information to solve the problem.

You may have chose this if you thought you needed to know how much of the second solution was used in the problem. Remember that the total minus the first solution would give you the second amount used.

General Comment: Build the model exactly as you did in Module 9M. Then, solve for the volume you are looking for.

6. Determine the appropriate model for the graph of points below.



The solution is Non-linear Power model, which is option C.

A. Exponential model

For this to be the correct option, we want an extremely slow change early, then a rapid change later.

B. Linear model

For this to be the correct option, we need to see a mostly straight line of points.

C. Non-linear Power model

For this to be the correct option, we need to see a polynomial or rational shape.

D. Logarithmic model

For this to be the correct option, we want a rapid change early, then an extremely slow change later.

E. None of the above

For this to be the correct option, we want to see no pattern in the points.

General Comment: This question is testing if you can associate the models with their graphical representation. If you are having trouble, go back to the corresponding Core module to learn about the specific function you are having trouble recognizing.

7. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$ to find the coefficient for the model of the new volume $V_{\text{new}} = kr^2 h$.

Pepsi wants to increase the volume of soda in their cans. They've decided to increase the radius by 12 percent and increase the height by 15 percent. They want to model the new volume based on the radius and height of the original cans.

The solution is $k = 4.53194$, which is option B.

A. $k = 0.00216$

This corresponds to the model: $V = (0.12r)^2(0.15h)$.

B. $k = 4.53194$

* This is the correct option and corresponds to the model: $V = \pi(1.12r)^2(1.15h)$.

C. $k = 1.44256$

This corresponds to the model: $V = (1.12r)^2(1.15h)$.

D. $k = 0.00679$

This corresponds to the model: $V = \pi(0.12r)^2(0.15h)$.

E. None of the above.

If you chose this, please talk with the coordinator to discuss why you believe none of the options are correct.

General Comment: When calculating the new dimensions, you need to add/subtract from 100%. For example, a 10% increase in height would result in 110% of the original height: $1.1h_{old} = h_{new}$.

8. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 48 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

The solution is About 14 percent, which is option D.

A. About 22 percent

This corresponds to solving correctly but treating both radius and height as equal contributors to the volume.

B. About 4 percent

This corresponds to not solving for the increase properly.

C. About 24 percent

This corresponds to treating both radius and height as equal contributors and not solving correctly.

D. About 14 percent

* This is the correct option.

E. None of the above

If you chose this, please contact the coordinator to discuss how you solved the problem.

General Comment: Remember that when plugging the increases of values in, you need to treat it as that percentage above 100. For example, a 5 percent increase means 105 percent.

9. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 19 liter 35 percent solution of chemical χ using two different solution percentages of chemical χ . When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 20 percent and 42 percent solutions, what was the amount she used of the 20 percent solution?

The solution is 6.05liters, which is option D.

A. 11.11liters

This was a random value. If this was not a guess, contact the coordinator to talk about how you got this value.

B. 9.50*liters*

This would be correct if Brittany used equal parts of each solution.

C. 12.95*liters*

This is the concentration of 42 percent solution.

D. 6.05*liters*

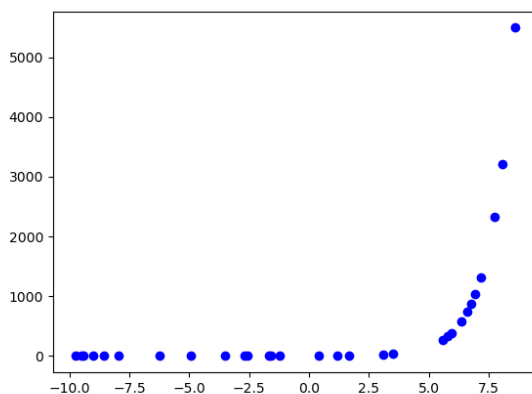
*This is the correct option.

E. There is not enough information to solve the problem.

You may have chose this if you thought you needed to know how much of the second solution was used in the problem. Remember that the total minus the first solution would give you the second amount used.

General Comment: Build the model exactly as you did in Module 9M. Then, solve for the volume you are looking for.

10. Determine the appropriate model for the graph of points below.



The solution is Exponential model, which is option D.

A. Non-linear Power model

For this to be the correct option, we need to see a polynomial or rational shape.

B. Linear model

For this to be the correct option, we need to see a mostly straight line of points.

C. Logarithmic model

For this to be the correct option, we want a rapid change early, then an extremely slow change later.

D. Exponential model

For this to be the correct option, we want an extremely slow change early, then a rapid change later.

E. None of the above

For this to be the correct option, we want to see no pattern in the points.

General Comment: This question is testing if you can associate the models with their graphical representation. If you are having trouble, go back to the corresponding Core module to learn about the specific function you are having trouble recognizing.

11. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 8 many cases reported, but the number of confirmed cases has quadrupled every 3 days. How long will it be until there are at least 1000000 confirmed cases?

The solution is About 26 days, which is option B.

- A. About 12 days

You modeled the situation correctly but did not apply the properties of log correctly.

- B. About 26 days

* This is the correct option.

- C. About 36 days

You modeled the situation with e as the base, but solved correctly otherwise.

- D. About 14 days

You modeled the situation with e as the base and did not apply the properties of log correctly.

- E. There is not enough information to solve the problem.

If you chose this option, please contact the coordinator to discuss why you think this is the case.

General Comment: Set up the model the same as in Module 11M. Then, plug in 1000000 and solve for d in your model.

12. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 7 many cases reported, but the number of confirmed cases has quadrupled every 4 days. How long will it be until there are at least 1000 confirmed cases?

The solution is About 15 days, which is option A.

- A. About 15 days

* This is the correct option.

- B. About 20 days

You modeled the situation with e as the base, but solved correctly otherwise.

- C. About 10 days

You modeled the situation with e as the base and did not apply the properties of log correctly.

- D. About 9 days

You modeled the situation correctly but did not apply the properties of log correctly.

- E. There is not enough information to solve the problem.

If you chose this option, please contact the coordinator to discuss why you think this is the case.

General Comment: Set up the model the same as in Module 11M. Then, plug in 1000 and solve for d in your model.

13. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 41 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

The solution is About 12 percent, which is option D.

- A. About 20 percent

This corresponds to treating both radius and height as equal contributors and not solving correctly.

- B. About 19 percent

This corresponds to solving correctly but treating both radius and height as equal contributors to the volume.

- C. About 3 percent

This corresponds to not solving for the increase properly.

- D. About 12 percent

* This is the correct option.

- E. None of the above

If you chose this, please contact the coordinator to discuss how you solved the problem.

General Comment: Remember that when plugging the increases of values in, you need to treat it as that percentage above 100. For example, a 5 percent increase means 105 percent.

14. Using the scenario below, model the population of bacteria α in terms of the number of minutes, t that pass. Then, choose the correct approximate (*rounded to the nearest minute*) replication rate of bacteria- α .

A newly discovered bacteria, α , is being examined in a lab. The lab started with a petri dish of 4 bacteria- α . After 3 hours, the petri dish has 19753 bacteria- α . Based on similar bacteria, the lab believes bacteria- α triples after some undetermined number of minutes.

The solution is None of the above, which is option E.

- A. About 14 minutes

This uses the wrong base.

- B. About 227 minutes

This uses the wrong base, does not solve for the constant correctly, AND converted incorrectly.

- C. About 88 minutes

This uses the wrong base and solves for the constant correctly but converted incorrectly.

- D. About 37 minutes

This uses the wrong base and does not solve for the constant correctly.

- E. None of the above

* This is the correct option as all other options used the wrong base in their model.

General Comment: Your model should be $P(t) = P_0(b)^{kt}$, where $P(t)$ is the population at some time t , P_0 is the initial population, and k is the replication rate. Be sure you convert the hours into minutes!

15. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 28 liter 34 percent solution of chemical χ using two different solution percentages of chemical χ . When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 20 percent and 36 percent solutions, what was the amount she used of the 36 percent solution?

The solution is 24.50liters, which is option A.

- A. 24.50liters

*This is the correct option.

- B. 3.26liters

This was a random value. If this was not a guess, contact the coordinator to talk about how you got this value.

- C. 3.50liters

This is the concentration of 20 percent solution.

- D. 14.00liters

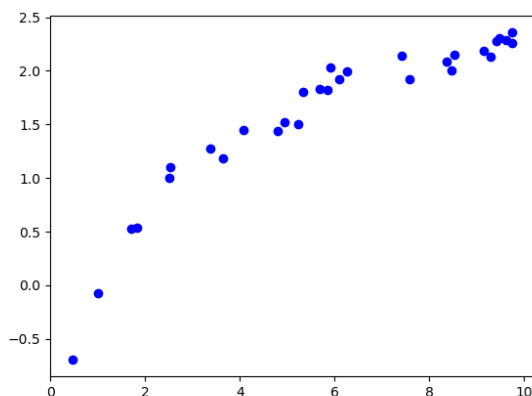
This would be correct if Brittany used equal parts of each solution.

- E. There is not enough information to solve the problem.

You may have chose this if you thought you needed to know how much of the second solution was used in the problem. Remember that the total minus the first solution would give you the second amount used.

General Comment: Build the model exactly as you did in Module 9M. Then, solve for the volume you are looking for.

16. Determine the appropriate model for the graph of points below.



The solution is Logarithmic model, which is option B.

A. Linear model

For this to be the correct option, we need to see a mostly straight line of points.

B. Logarithmic model

For this to be the correct option, we want a rapid change early, then an extremely slow change later.

C. Exponential model

For this to be the correct option, we want an extremely slow change early, then a rapid change later.

D. Non-linear Power model

For this to be the correct option, we need to see a polynomial or rational shape.

E. None of the above

For this to be the correct option, we want to see no pattern in the points.

General Comment: This question is testing if you can associate the models with their graphical representation. If you are having trouble, go back to the corresponding Core module to learn about the specific function you are having trouble recognizing.

17. For the information provided below, construct a linear model that describes the total distance of the path, D , in terms of the time spent on a particular path *if we know that the time spent on each path was equal*.

A bicyclist is training for a race on a hilly path. Their bike keeps track of their speed at any time, but not the distance traveled. Their speed traveling up a hill is 6 mph, 10 mph when traveling down a hill, and 8 mph when traveling along a flat portion.

The solution is $24t$, which is option C.

A. $0.392t$

The coefficient here is calculated as if you were trying to model the time on the total path.

B. $480t$

The coefficient here is calculated by multiplying the speeds together rather than adding them.

C. $24t$

* This is the correct option since time spent on each path is equal.

D. The model can be found with the information provided, but isn't options 1-3.

Since the time spent on each path was equal, we can treat all time variables as the same variable, t .

E. The model cannot be found with the information provided.

If you chose this option, please contact the coordinator to discuss why you think we cannot model the situation.

General Comment: Be sure you pay attention to the variable we are writing the model in terms of. To create the model with a single variable, we have to know that variable is the same throughout each path!

18. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 30 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

The solution is About 9 percent, which is option C.

A. About 15 percent

This corresponds to treating both radius and height as equal contributors and not solving correctly.

B. About 14 percent

This corresponds to solving correctly but treating both radius and height as equal contributors to the volume.

C. About 9 percent

* This is the correct option.

D. About 3 percent

This corresponds to not solving for the increase properly.

E. None of the above

If you chose this, please contact the coordinator to discuss how you solved the problem.

General Comment: Remember that when plugging the increases of values in, you need to treat it as that percentage above 100. For example, a 5 percent increase means 105 percent.

19. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 27 liter 27 percent solution of chemical χ using two different solution percentages of chemical χ . When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 16 percent and 37 percent solutions, what was the amount she used of the 16 percent solution?

The solution is 12.86liters, which is option B.

A. 13.39liters

This was a random value. If this was not a guess, contact the coordinator to talk about how you got this value.

B. 12.86liters

*This is the correct option.

C. 13.50liters

This would be correct if Brittany used equal parts of each solution.

D. 14.14liters

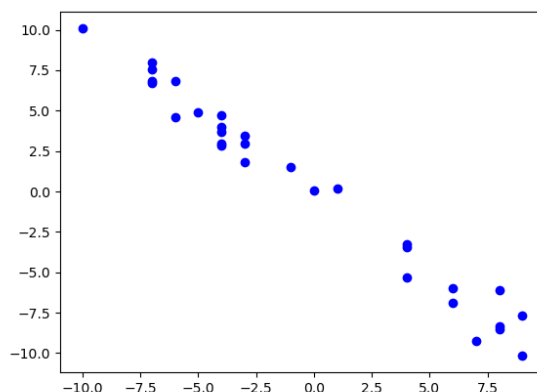
This is the concentration of 37 percent solution.

E. There is not enough information to solve the problem.

You may have chose this if you thought you needed to know how much of the second solution was used in the problem. Remember that the total minus the first solution would give you the second amount used.

General Comment: Build the model exactly as you did in Module 9M. Then, solve for the volume you are looking for.

20. Determine the appropriate model for the graph of points below.



The solution is Linear model, which is option B.

A. Non-linear Power model

For this to be the correct option, we need to see a polynomial or rational shape.

B. Linear model

For this to be the correct option, we need to see a mostly straight line of points.

C. Exponential model

For this to be the correct option, we want an extremely slow change early, then a rapid change later.

D. Logarithmic model

For this to be the correct option, we want a rapid change early, then an extremely slow change later.

E. None of the above

For this to be the correct option, we want to see no pattern in the points.

General Comment: This question is testing if you can associate the models with their graphical representation. If you are having trouble, go back to the corresponding Core module to learn about the specific function you are having trouble recognizing.

21. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 8 many cases reported, but the number of confirmed cases has doubled every 3 days. How long will it be until there are at least 1000000 confirmed cases?

The solution is About 51 days, which is option B.

A. About 14 days

You modeled the situation with e as the base and did not apply the properties of log correctly.

B. About 51 days

* This is the correct option.

C. About 36 days

You modeled the situation with e as the base, but solved correctly otherwise.

D. About 15 days

You modeled the situation correctly but did not apply the properties of log correctly.

E. There is not enough information to solve the problem.

If you chose this option, please contact the coordinator to discuss why you think this is the case.

General Comment: Set up the model the same as in Module 11M. Then, plug in 1000000 and solve for d in your model.

22. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 8 many cases reported, but the number of confirmed cases has doubled every 3 days. How long will it be until there are at least 1000000 confirmed cases?

The solution is About 51 days, which is option B.

A. About 36 days

You modeled the situation with e as the base, but solved correctly otherwise.

B. About 51 days

* This is the correct option.

C. About 15 days

You modeled the situation correctly but did not apply the properties of log correctly.

D. About 14 days

You modeled the situation with e as the base and did not apply the properties of log correctly.

E. There is not enough information to solve the problem.

If you chose this option, please contact the coordinator to discuss why you think this is the case.

General Comment: Set up the model the same as in Module 11M. Then, plug in 1000000 and solve for d in your model.

23. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 34 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

The solution is About 10 percent, which is option A.

A. About 10 percent

* This is the correct option.

B. About 3 percent

This corresponds to not solving for the increase properly.

C. About 16 percent

This corresponds to solving correctly but treating both radius and height as equal contributors to the volume.

D. About 17 percent

This corresponds to treating both radius and height as equal contributors and not solving correctly.

E. None of the above

If you chose this, please contact the coordinator to discuss how you solved the problem.

General Comment: Remember that when plugging the increases of values in, you need to treat it as that percentage above 100. For example, a 5 percent increase means 105 percent.

24. For the information provided below, construct a linear model that describes her total costs, C , as a function of the number of months, x she is at UF.

Aubrey is a college student going into her first year at UF. She will receive Bright Futures, which covers her tuition plus a \$400 educational expense each year. Before college, Aubrey saved up \$11000. She knows she will need to pay \$700 in rent a month, \$70 for food a week, and \$40 in other weekly expenses.

The solution is $C(x) = 1140x$, which is option D.

A. $C(x) = 810$

This treats weekly expenses as month expenses rather than multiplying each weekly expense by 4 AND does not account for these expenses per month.

B. $C(x) = 810x$

This treats weekly expenses as monthly expenses rather than multiplying each weekly expense by 4.

C. $C(x) = 1140$

This describes the costs as if they are one-time only and not monthly.

D. $C(x) = 1140x$

* This is the correct option.

E. None of the above.

You may have chosen this as you thought you were modeling total income or total budget.

General Comment: This is a Costs, Profit, Revenue question! The most common issues here are: (1) not converting the weekly costs to monthly costs, (2) treating the one-time values like savings and educational expense as happening per month, and (3) not checking that your model is for cost, profit [income], or revenue [budget].

25. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 28 liter 34 percent solution of chemical χ using two different solution percentages of chemical χ . When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 14 percent and 41 percent solutions, what was the amount she used of the 14 percent solution?

The solution is 7.26liters, which is option B.

A. 12.40*liters*

This was a random value. If this was not a guess, contact the coordinator to talk about how you got this value.

B. 7.26*liters*

*This is the correct option.

C. 20.74*liters*

This is the concentration of 41 percent solution.

D. 14.00*liters*

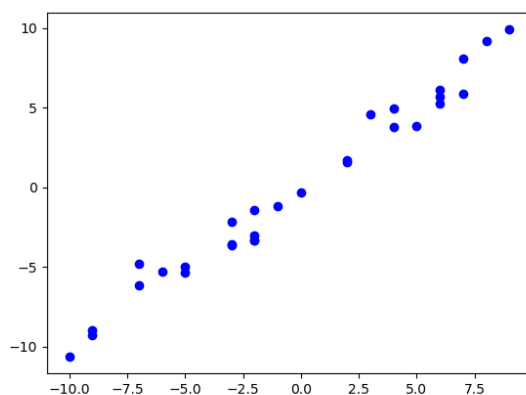
This would be correct if Brittany used equal parts of each solution.

E. There is not enough information to solve the problem.

You may have chose this if you thought you needed to know how much of the second solution was used in the problem. Remember that the total minus the first solution would give you the second amount used.

General Comment: Build the model exactly as you did in Module 9M. Then, solve for the volume you are looking for.

26. Determine the appropriate model for the graph of points below.



The solution is Linear model, which is option A.

A. Linear model

For this to be the correct option, we need to see a mostly straight line of points.

B. Logarithmic model

For this to be the correct option, we want a rapid change early, then an extremely slow change later.

C. Non-linear Power model

For this to be the correct option, we need to see a polynomial or rational shape.

D. Exponential model

For this to be the correct option, we want an extremely slow change early, then a rapid change later.

E. None of the above

For this to be the correct option, we want to see no pattern in the points.

General Comment: This question is testing if you can associate the models with their graphical representation. If you are having trouble, go back to the corresponding Core module to learn about the specific function you are having trouble recognizing.

27. For the scenario below, model the rate of vibration (cm/s) of the string in terms of the length of the string. Then determine the variation constant k of the model (if possible). The constant should be in terms of cm and s.

The rate of vibration of a string under constant tension varies based on the type of string and the length of the string. The rate of vibration of string ω increases as the square length of the string decreases. For example, when string ω is 3 mm long, the rate of vibration is 25 cm/s.

The solution is $k = 2.25$, which is option B.

A. $k = 2.78$

This option uses the model $R = kl^2$ as if this is a direct variation AND does not convert from mm to cm so that the units match.

B. $k = 2.25$

* This is the correct option, which corresponds to the model $R = \frac{k}{l^2}$ AND converts from mm to cm.

C. $k = 277.78$

This option uses the model $R = kl^2$ as if this is a direct variation.

D. $k = 225.00$

This option uses the correct model, $R = \frac{k}{l^2}$, but does not convert from mm to cm so that the units match.

E. None of the above.

Talk with the coordinator if you chose this option.

General Comment: The most common mistake on this question is to not convert mm to cm! When modeling, you need to make sure all of the units for your variables are compatible.

28. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 35 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

The solution is About 11 percent, which is option D.

A. About 3 percent

This corresponds to not solving for the increase properly.

B. About 18 percent

This corresponds to treating both radius and height as equal contributors and not solving correctly.

C. About 16 percent

This corresponds to solving correctly but treating both radius and height as equal contributors to the volume.

D. About 11 percent

* This is the correct option.

E. None of the above

If you chose this, please contact the coordinator to discuss how you solved the problem.

General Comment: Remember that when plugging the increases of values in, you need to treat it as that percentage above 100. For example, a 5 percent increase means 105 percent.

29. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 22 liter 13 percent solution of chemical χ using two different solution percentages of chemical χ . When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 13 percent and 37 percent solutions, what was the amount she used of the 13 percent solution?

The solution is 22.00liters, which is option D.

A. 11.00liters

This would be correct if Brittany used equal parts of each solution.

B. 2.56liters

This was a random value. If this was not a guess, contact the coordinator to talk about how you got this value.

C. 0.00liters

This is the concentration of 37 percent solution.

D. 22.00liters

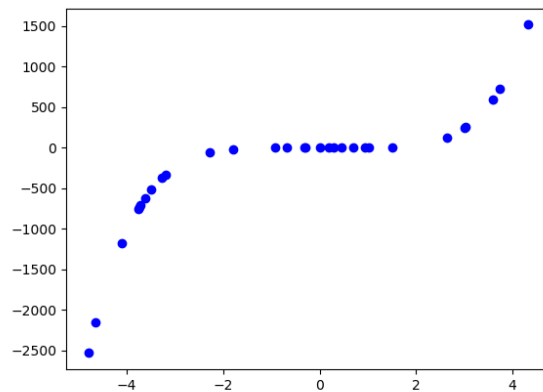
*This is the correct option.

E. There is not enough information to solve the problem.

You may have chose this if you thought you needed to know how much of the second solution was used in the problem. Remember that the total minus the first solution would give you the second amount used.

General Comment: Build the model exactly as you did in Module 9M. Then, solve for the volume you are looking for.

30. Determine the appropriate model for the graph of points below.



The solution is Non-linear Power model, which is option B.

A. Linear model

For this to be the correct option, we need to see a mostly straight line of points.

B. Non-linear Power model

For this to be the correct option, we need to see a polynomial or rational shape.

C. Exponential model

For this to be the correct option, we want an extremely slow change early, then a rapid change later.

D. Logarithmic model

For this to be the correct option, we want a rapid change early, then an extremely slow change later.

E. None of the above

For this to be the correct option, we want to see no pattern in the points.

General Comment: This question is testing if you can associate the models with their graphical representation. If you are having trouble, go back to the corresponding Core module to learn about the specific function you are having trouble recognizing.
